

RURAL DRINKING WATER SUPPLY
in
UTTAR PRADESH

P. N. PANDE

&

D. K. BAJPAI

GIRI INSTITUTE OF DEVELOPMENT STUDIES

B-42 NIRALANAGAR LUCKNOW 226007

RURAL DRINKING WATER SUPPLY IN UTTAR PRADESH

P.N. Pande
&
D.K. Bajpai

Man has realised the importance of water since the dawn of human civilization. Water is essential not only for the sustenance of human life and activities but for the quality of life as well. In the CHANDOGYA UPNISHAD it has been mentioned that the water is greater than food. The availability of safe drinking water and sanitation facilities have a direct impact on the working conditions and health of the people. The quality of water, in a large measure, reflects the quality of environment and the ecological balance through human behaviour. The human body has 65 per cent water and every day one must replace 5 per cent of it.

Majority of people in the developing countries are living in rural areas and do not have access to a safe and convenient source of drinking water. If somewhere the sources exist, they do not have satisfactory sewage disposal facilities. The problem of water supply is more acute in rural areas of these countries where people are living in a unhygienic conditions. An adequate supply of drinking water and proper means of waste disposal are essential parts of public health system. The provision of safe drinking water and proper disposal of waste constitute the principal basic control measures against the transmission of the most water-borne diseases.

Potable water supply systems in rural areas of developing countries is essential not only for better health and economic development but also a pre-condition for environmental balance. Now it is recognised that an adequate supply of safe water is necessary for good health and productivity. The potential effects of water supply systems can be seen under macro-economic effects - direct economic effects on development and production and effects on increased time for productive work through improved health. For the last two decades the developing countries are giving due considerations to the problems of drinking water and sanitation. A water supply system is both a consumption and an investment item. In developing countries a bulk of investment funds is needed to improve their water supply and sanitation services. Improvement in water supply and sanitation generates income and social welfare and it brings inter related improvements in health. Safe and potable drinking water and neat hygienic environment are some of the basic requirement for healthy living. A potable water supply systems in rural areas of developing countries may affect household, local, regional and national output, economic growth and environment. Planning is necessary instrument to create conditions for accelerated economic growth and to achieve an equitable and balanced society. Among other economic needs, safe drinking water for community is basic one.

The main objective of rural water supply is to provide safe water, easily accessible, in quantities adequate for

drinking, food preparation, personal hygiene, and some time to small livestock, at a cost in keeping with the economic level of the people and through facilities which can be easily operated and maintained at the local level. The objective of the sanitation component is to provide means for safe disposal of human excreta through low cost, easily maintained facilities, and to protect the health of the communities from water and excreta - related diseases.

In most part of rural areas in our country, people depend for obtaining water for drinking and washing on rivers, lakes, streams, wells and ponds. In many cases this water is highly contaminated and unsafe for human consumption and sometimes available at great distance. The objective of providing safe drinking water is to ensure safe drinking water to villages suffering from chronic scarcity or those with unsafe sources of water. Pure drinking water facilities and proper arrangement of sewerage are considered to be essential for the existence of a civilized society. Water-related diseases affecting Man's health are relatively widespread and abundant in rural areas of developing countries. The incidence of water born diseases depends on local climate, topography, geography, culture, sanitation habits and facilities, health education, income level, awareness and on the quality of the local water supply and system of waste disposal. The quality of water also proves a asset to the community. The water supply and sanitation services determine the environmental profile also.

Safe drinking water facility has direct effect on the level of health of the people and their working condition and ultimately the capacity of production is determined.

The problem of safe drinking water is mostly associated with the rural areas in our country where more than 76 per cent of the population is living. It is estimated that lack of safe drinking water supply is responsible for many water-borne diseases account for about 50 per cent diseases in India. The Special Investigation Divisions, established during the Third Five Year Plan period, were the first step in identifying the villages which could be regarded as problem (scarcity) villages from the point of view of the quality and accessibility of drinking water sources. According to official criteria, a scarcity village is a village for which at least one of the following criteria applies :

The depth of the water table is more than 15 m.;

The source dries up in summer;

The water is oily, brakish or contains excess flourides (more than 1 mg./l); and

The distance to the source exceeds 1 mile.

In 1971-72, a total of 1.52 lakh villages in our country were identified as being without a safe and assured source of drinking water. Of these, 19,000 villages were classified as scarcity and difficult villages and 62,000 as health problem villages. The National Water Supply and Sanitation Programme was launched by Government of India in 1954. Thereafter, more

and more funds were made available in subsequent plans of the whole country but the funds remained inadequate to tackle the problem.

Uttar Pradesh, with 110,885,874 people (1981) is most populous State accounting for about 16 per cent of the country's population and about 9 per cent of its area. The population of the State is increased by 25.49 per cent during the decade 1971-81 and it was higher than national average (24.75 per cent). Consequently, population densities are rather high throughout the State. On average the density amounts to 333 inhabitants per square kilometre in rural areas as against 455 in urban ones. The literacy level in U.P. is 27.16 per cent according to Census 1981. The rural population of the state is about 82 per cent of total population.

According to survey made in 1971-72, out of 1,12,561 villages in U.P., 35,506 villages were identified as scarcity villages. Sewerage and water supply programme is being implemented in the state by two agencies : (i) Jal Nigam, and (ii) Gram Vikas Vibhag. The Jal Nigam is looking after the supply of safe and potable water to urban and rural areas by means of piped water and by installing hand pumps, while the Gram Vikas Vibhag is entrusted with supply of drinking water to Harijan Basties of rural areas by constructing wells in plain and diggies in hill areas. Before going to discuss the position of drinking water system and programmes in rural areas of U.P., we analyse the financial aspects of the State in brief.

Due to inadequacy in financial resources, the U.P. Government is not able to allocate ear-marked fund to tackle the problem of drinking water facility in rural areas. The three major components of State revenue, i.e., taxes and duties levied by the State, non-tax receipts and allocations by Central Government constitute the income of the State. In 1981-82, total State revenue amounted to Rs.233189 lakhs (Appendix Table-1). The non-tax revenue has decreased in relative terms, from 41.5 per cent in 1970-71 to 32 per cent in 1981-82. The tax revenue in U.P. has increased very unevenly during the past ten years but has recently barely kept pace with inflation and population growth.

The plan expenditure in the Sixth Five Year Plan (1980-85) is Rs.6,20,000 lakhs. Water and Power Development seems the largest sector which consumes nearly 54 per cent of the total plan expenditure (Appendix Table 3). The second largest sector in the Sixth Plan is social and community services for which 15.74 per cent is set aside (Rs.97575 lakhs). This heading includes education, research, health, water supply and sanitation, housing, urban development and various other welfare programmes. Water supply and sanitation is the largest single component in this sector. In Sixth Five Year Plan the outlay for water supply and sanitation is 31.36 per cent of the total expenditure under Social and Community Services. About 70 per cent (Appendix Table 6) of the approved outlay for water supply and sanitation has been set aside for rural areas, but thereafter the pattern of the annual expenditure on this shows that

funds ear-marked for rural projects have been spent on urban projects. When we look the figures of all the Five Year and Annual Plans of Uttar Pradesh (1951-52 to 1980-85) we find that out of total expenditure on all plans, the social and community service sector absorbed 14.88 per cent expenditure. The water supply and sanitation sector received only 4.09 per cent funds out of total outlay of all Five Year and Annual Plans in the State. The sewerage/sanitation component is small and confined to urban areas only.

Table 1 : Plan-wise Expenditure on Rural Drinking Water Schemes and No. of Villages Covered in U.P.

Plan period	Expenditure (Rs. in Crores)	No. of villa- ges covered
Ist Five Year Plan	0.01	-
IIInd Five Year Plan	0.15	37
IIIrd Five Year Plan	2.04	127
Three Annual Plans	6.12	1273
IVth Five Year Plan	16.63	2387
Vth Five Year Plan	30.68	2846
Year 1979-80	51.69	3386

Upto 1979-80, total expenditure of Rs.107.32 crores has been incurred in rural water supply schemes in Uttar Pradesh and at least 11,056 villages have been covered. Under Minimum Needs Programme, 7,001 villages have been provided with the piped water supply facilities by March 1980. It was estimated that an outlay of Rs.605 crores would be required to provide

piped water facilities to 28,505 scarcity villages which were yet to be covered. The villages which have been covered by piped water supply in different regions of U.P. are shown in Table 2.

Table 2 : Villages Covered by Piped Water Supply in Uttar Pradesh by March 1981

Regions	Total villages (1971)	No. of scarcity villages	Villages covered with drinking water faci- lities	No. of scarcity villages covered with drink- ing water
Hill	15,010	7,771	6,531	4,786
Bundelkhand	4,544	2,809	1,220	971
Central	15,530	2,926	197	116
Eastern	49,395	15,412	1,869	1,869
Western	28,082	6,588	224	224

By spending Rs.34.87 crores under Minimum Needs Programme and Rs.5.73 crores under Accelerated Rural Water Supply Scheme, 1468 villages were provided drinking water facility during 1981-82, in which 870 villages were scarcity villages. Out of total 35506 scarcity villages in U.P., 8782 villages were provided drinking water facility upto 1982. The Accelerated Rural Water Supply Scheme - a hundred per cent centrally sponsored programme - was launched by Government of India in 1979-80. A grant of Rs.90.00 crores is expected from Government of India during Sixth Five Year Plan period under this scheme. For the year 1982-83, there was a provision of Rs.34.60 crores under MNP and Rs.20.00 crores under ARWSP and total 4500 villa-

ges have been provided drinking water facility. 40.91 crores were made available under Accelerated Rural Water Supply Programme by the Government of India against the balance amount of Sixth Five Year Plan. With this allocation, all the 198 ongoing piped rural water schemes covering about 2600 villages, sponsored in the year 1978-79 will be completed and new schemes mainly with handpumps will be taken-up. In the year 1983-84, about 5500 problem villages were proposed to be covered under this programme.

The financial resources of Uttar Pradesh Government has been meagre which resulted in slow growth of the water supply and sewerage facilities in the urban and rural areas of the State. It was, therefore, considered necessary to explore the possibility if obtaining assistance from Financial Institutions and International Agencies like World Bank, UNICEF and Governments of other countries, like, Netherlands to accelerate the development of this programme in the State.

Dutch Credit Programme

The Netherlands Government is giving financial assistance to provide safe drinking water supply to the rural areas of three eastern districts of U.P., viz., Allahabad, Rae Bareli, Varanasi and three western districts, viz., Mathura, Agra and Etawah. An agreement for obtaining financial aid amounting to Rs. 24.15 crores has been entered into by the Government of India with the Netherlands government. The amount earmarked

for the district of Allahabad, Varanasi and Rae Bareli of East U.P. is Rs. 14.91 crores while amount earmarked for the districts of Agra, Mathura and Etawah of western U.P. is Rs. 9.24 crores. In all 66 rural water supply schemes covering 1,136 villages have been included in this programme for East and West U.P.

Table 3 : Districtwise Scheme of Dutch Credit Programme

Name of the district	No. of scheme	No. of villages covered	Population served in the begin- ing	Population served by the end of design period	Cost (Rs. in lakhs)
1. Agra	13	72	149000	224400	330.17
2. Mathura	20	91	158000	236300	349.27
3. Etawah	6	112	113000	179100	273.75
4. Varanasi	8	383	212000	453500	492.49
5. Rae Bareli	10	241	302000	318600	523.93
6. Allahabad	9	237	316000	324960	514.33
TOTAL		66	1136	125100	2482.98

The above programme has been presented under 6 sub-projects, 3 sub-projects, to cover 3 districts of East U.P., namely, Allahabad, Varanasi and Rae Bareli and 3 sub-projects to cover 3 districts of West U.P., viz., Agra, Mathura and Etawah. The sub-project-I of East U.P. originally amounting to Rs. 11.91 crores, now revised to Rs. 15.47 crores after including some additional works, has been cleared by the Netherlands Government. Other estimates are under approval with them.

During 1984-85 works worth Rs.13 crores are expected to be executed and efforts will be made to mobilize this resource in the course of the year.

Gram Vikas Vibhag

The drinking water scheme of Gram Vikas Vibhag aims at providing drinking water facilities to Harijan Basties. Special attention has been given to provide drinking water facility in Scheduled Caste and Scheduled Tribe basties since 1971-72. Later this scheme was included under Minimum Needs Programme (MNP) in the Fifth Five Year Plan and is now a part of new 20-point programme also. Provisions have been made to provide wells and handpumps in plain areas and Diggies in hill areas of the State. Under this scheme wells and handpumps (handpumps in Deoria and Kheri districts) are constructed in rural areas of the plains and diggies in hills. During the Sixth Five Year Plan, with an approved outlay of Rs.1,650 lakhs including Rs.250 lakhs for hills, it is proposed to extend drinking water facilities to rural Harijan Basties through constructing 16016 wells, 10,000 handpumps and 2500 diggies. Table 4 highlights the progress in terms of physical achievements in connection of drinking water facilities in rural areas.

Table 4 : Outlay and Expenditure on Wells, Hand-pumps and Diggies

Year	Expenditure (Rs.in lakhs)	Physical Achievement		
		Wells	Hand-pumps	Diggies
1971-73	300.00	10552	956	417
1973-74	34.95	886	-	281
1974-77	65.35	1676	-	159
1977-78	203.75	5318	-	50
1978-79	740.00	16971	-	136
1979-80	358.00	3599	2792	412
1980-81	200.00	4864	140	264
1981-82	282.00	4080	782	672
1982-83	440.70	4195	2024	736
1983-84 (Anticipated)	259.00	2179	-	500
1984-85 (Proposed)	65.00	-	-	600

Minimum Needs Programme

The rural water supply has been given great importance and a high priority by the State Government as well as by Central Government. The new Zo-Point programme emphasised the urgency of covering all the problem villages by the end of the Sixth Plan. Till the end of 1981-82, the coverages of villages was mainly by piped water supply, except in UNICEF assisted programme of Handpumps in rocky areas of Bundelkhand, Mirzapur, Varanasi and Allahabad districts of the State. A conference of the State Secretaries, Chief Engineers and Head of all Implementing Agencies of all the States and the Union Territories was held on 3rd February 1982 at New Delhi and

the decade programme (1981-1990) was reviewed in the Conference. According to recommendations of the conference at least one source of potable water should be available throughout the year in every problem village. The conference was of the opinion that spot sources, viz., sanitary dug wells and deep tube-wells fitted with India Mark II are to be given first priority and piped water supply will be the last alternative. Based on these guidelines, the field survey of the remaining problem villages carried out by the Jal Nigam revealed that out of the remaining 21105 problem villages, as on 1st April, 1983, 4617 villages will have to be provided water with pipes because of high salinity/fluoride contents or non-availability of the sources and the remaining i.e., 16488 will be covered by handpumps, as sanitary dug wells fitted with handpumps works out to be costlier. It is estimated that about Rs.234 crores will be required to achieve the coverage of these problem villages in the remaining period of Sixth Five Year Plan, if the villages are to be covered by handpumps for full saturation. Against this requirement, about Rs.157 crores (Rs.95 crores in the State Plan under the Minimum Needs Programme and Rs.62 crores under Centrally Sponsored Accelerated Programme) are expected to be made available. This leaves a gap of about Rs.77 crores for which additional allocation will be needed. A sum of Rs.40.19 crores have been proposed in the year 1983-84 in the State sector for Rural Water Supply Programme. Of this Rs.18.28 crores are earmarked for the Hill region of the State.

While the first priority has been given for the completion of ongoing schemes, a sizeable amount has been kept for covering new villages also. With this allocation, 2500 problem villages will be covered. The break-up of the coverage of villages by piped water supply and handpumps would be 840 and 1660 respectively. Besides these problem villages, about 639 non-problem villages will be benefited by the piped water supply, making a total of 3139 villages. Out of above allocation about Rs.305.40 lakhs are proposed to be spent on the schemes in the district Varanasi, Allahabad, Rae Bareli, Mathura, Agra and Etawah under the 'Dutch Credit Programme'. Thus a provision of Rs.133.572 crores has been made upto 1983-85. Against this, an outlay of only Rs.45 crores could be made available for 1984-85, on account of resource constraint leaving a gap of (Rs.69.928 - 45.00 = 24.928) Rs.25 crores. With this allocation only 5019 problem villages will be covered, out of which 1813 villages will be covered by piped water supply and 3206 villages by handpumps.

Table 5 : Position of Rural Drinking Water Facilities in Different Regions of Uttar Pradesh

Regions	Percentage of villages benefit- ed with drinking water supply upto March 1983		No. of pro- blem vill- ages as on March 1983
	Problem villages	Total Villages	
Western	33.05	8.29	4411
Central	33.51	7.79	1887
Eastern	27.39	12.59	11191
Hill	72.73	52.16	2119
Bundelkhand	46.71	36.47	1497
Total of U.P. State	40.56	17.11	21105

In Uttar Pradesh, about 40.56 per cent problem villages have been provided by potable drinking water supply upto March 1983. The number of problem villages, which are yet to be given drinking water facilities, are 21105. The region-wise position (Table 5) of problem villages, which have been provided drinking water supply in rural areas (upto March 1983) shows that Hill region ranks the first position where more than 72 per cent problem villages have been covered with drinking water facility.

The 31st United Nations General Assembly endorsed the recommendations of United Nation's World Conference held in March 1977 and set the largest to provide clear water and sanitation for all the people of the world during the decade 1981-90. About three billion people in the developing countries will need improved water supply and sanitation services by 1990. This is the ambitious goal of the International Drinking Water Supply and Sanitation Decade (IDWSSD). India, being one of the participating countries, has kept the following recommendations :

- i. 100 per cent of the urban population to be covered with basic minimum needs of the safe water supply;
- ii. 80 per cent of the urban population to be covered with either sewerage system or sanitary toilet connected to safe disposal system;
- iii. 100 per cent of the rural population to be covered with basic minimum needs of the safe water; and
- iv. 25 per cent or more of the rural population to be covered with sanitary toilets.

Keeping with view the above target set for International Drinking Water Supply and Sanitation Decade, the State Jal Nigam also chalked out a ten-year plan with an estimated cost of Rs. 2320 crores. The new 20-Point Programme gives more attention to the rural water supply schemes and it is hoped that under this programme the given target will be fulfilled earlier than its scheduled time.

Rural water supply and sanitation programmes usually consist of many sub-projects providing for planning, construction and placing into operation for a large number of facilities in various locations over a large and scattered area, in a stated period of time. They also provide for community development, health and hygiene education, training, technical assistance and operation and maintenance support.

Providing water supply to villages is not a solution of water scarcity and its related problems. The other aspects of the water supply system which are related to human health need an integrated and multi-phased approach. Any project for water supply system should give due consideration to the following aspects :

- i. The felt need of the population in the area;
- ii. The pre-feasible study;
- iii. Proper and effective system of water supply;
- iv. Topography and climate of the area;
- v. Operational and management aspect;

- vi. Distribution pattern of water supply;
- vii. Paying (water charges) capacity of the people;
- viii. Socio-economic implications;
- ix. Life-style of the community;
- x. Health and sanitation aspect; and
- xi. Environmental aspects.

A Water supply project could be defined as a set of physical components (wells, handpumps, dams, treatment plants, pipe lines, etc.) and a set of supporting activities (staff training, management assistance, etc.). Essential complementary inputs (such as primary health care centres or sanitation improvements) have important role in a water supply project. A pre-feasibility study is useful for proper functioning of water supply system. The study considers all probable impact and concludes whether the project is technically and institutionally feasible, financially viable, socio-culturally acceptable and economically justified. The feasibility report confirms the rational for selecting the preferred project. It also provides preliminary design and cost estimates for the project based on considerable data gathering and analysis, with input from ultimate users. The prefeasibility report analyses past, present and future for service. It also examines existing systems, the degree to which systems meet all demands in the project area. The feasibility report for large and complex projects normally forms the basis for the appraisal report and investment decision by financing agencies, after which implementation could be proceeded without any delay.

The water supply system has many components for desired implementations. Community participation and awareness are the essential requirements for the success of any programme. The water and sanitation systems which are not wanted by the people for whom they are intended will not be properly used or maintained and will not produce the desired benefits. Therefore, representation of the intended beneficiaries should be consulted during project planning. The villagers generally do not feel any responsibility to maintain the water supply system. In many countries, it has been found that one of the principal causes of system failure has been the lack of participation of the villagers in every phase of the local water supply and sanitation schemes, and the lack of contribution to their construction and operation. Unless users are involved from the beginning and are conscious of a need for safe water and sanitation, there is a danger that the facilities will not be properly used or maintained. A rural water supply programme should provide for continuing technical and administrative support for the villages involved in the programme. The concept of rural water supply schemes can be included with rural health education, so that the villagers may aware about the diseases associated with water and the sanitation problem. Provision of proper sanitation facility is part and parcel of the water supply scheme. Health and social education (informal education) should be introduced at grass-root level of education system and it should also be included in Adult Education

10808

Programme, which will produce a spirit of awareness and a sense of active participation among rural population. Awareness about the importance of overhead and social capital (social utility things) can come through informal education. The informal education and awareness may reduce the problem of maintenance to a great extent. The three social components of safe drinking water : water supply, sanitation and health education should be realized simultaneously so that the rural water supply schemes may continue for a long time. The development of local expertise should be an important goal of any government's national strategy for improving water supply and sanitation services. The facilities to be installed should be appropriate to the local conditions and acceptable to the users.

The Dutch Appraisal Mission (1983) has suggested in its report to the Government of Netherlands for financial assistance to India in terms of three heads - water supply, sanitation, and health education. Keeping in view the low level of literacy prevalent in the rural areas, it is most appropriate not to keep water supply alone in isolation but to include with it the need for proper sewerage and sanitation and the same time improve the knowledge of the masses on the health education aspect as well. To achieve full benefits from investments made towards water supply, therefore, usually requires public health and hygiene education programmes tailored to local customs and beliefs.

Appendix Table-1

Source of State Revenue - Uttar Pradesh (1970-71
and 1983-84)

Year	State taxes and duties (Rs. in lakhs)	Share from Central Taxes (Rs.in lakhs)	Non-tax Revenue (Rs.in lakhs)	Total lakhs)
1970-71	15285	13105	20150	48540
1971-72	15572	16034	20983	52589
1972-73	17789	17946	22144	57879
1973-74	22560	19675	24485	66719
1974-75	27603	22206	21911	71720
1975-76	39335	29640	26130	95105
1976-77	45465	31591	33475	110531
1977-78	46731	35222	34513	116466
1978-79	50815	39639	45727	136181
1979-80	56228	58258	53961	168447
1980-81	64513	66524	61829	192866
1981-82 +	82279	78715	72195	233189
1982-83 ‡	85819	83967	79101	248887
1983-84	94014	91539	74345	259898

Note : + = Revised estimates

‡ = Quick estimates

Source : Statistical Diary (Uttar Pradesh) of different years, State Planning Institute, Lucknow.

Appendix Table-2

Percentage Share of State Revenue by Different Sources
(Uttar Pradesh)

Year	State taxes and duties	Share from Central taxes	Non-tax Revenue	Total
1970-71	31.49	26.99	41.52	100.00
1971-72	29.62	30.49	39.89	100.00
1972-73	30.73	31.00	38.27	100.00
1973-74	33.81	29.49	36.70	100.00
1974-75	38.48	30.98	30.54	100.00
1975-76	41.36	31.17	27.47	100.00
1976-77	41.14	28.58	39.28	100.00
1977-78	40.12	30.25	29.63	100.00
1978-79	37.31	29.11	33.58	100.00
1979-80	33.38	34.58	32.04	100.00
1980-81	33.45	34.49	32.06	100.00
1981-82	35.28	33.76	30.96	100.00

Source : Statistical Diary (Uttar Pradesh) of
Different Years, State Planning
Institute, Lucknow.

Appendix Table-3

Expenditure on Five Year Plans and Annual Plans : U.P.

Head of Development	First Plan (1951-56)	Second Plan (1956-61)	Third Plan (1961-66)	Three Annual Plans (1966-69)	Fourth Plan (1969-74)	Fifth Plan (1974-79)	Outlay in Sixteenth Plan (1980-85)
Agriculture and Allied Services	3787 (24.70)	6742 (28.89)	15608 (27.85)	11550 (25.50)	22097 (18.96)	40687 (13.92)	92776 (14.97)
Co-operation	131 (0.85)	414 (1.77)	806 (1.14)	1428 (3.17)	1252 (1.07)	3329 (1.34)	5739 (0.92)
Water and Power Development	5622 (36.66)	8218 (35.21)	21869 (39.01)	22736 (50.36)	63801 (54.75)	167951 (57.33)	333700 (53.82)
Transport and Communication	686 (4.47)	1537 (6.59)	2814 (5.02)	1712 (3.79)	7605 (6.52)	24702 (8.14)	55000 (8.37)
Industry and Mining	637 (4.15)	1292 (5.54)	2085 (3.72)	1777 (3.94)	4041 (3.47)	18216 (6.23)	33100 (5.34)
Social and Community Services	4474 (29.17)	4601 (19.72)	10335 (18.43)	4963 (10.99)	15328 (13.16)	36837 (12.59)	97575 (15.74)
Other services	- (2.28)	532 (4.54)	2537 (2.16)	974 (2.16)	2415 (2.07)	724 (0.25)	2100 (0.34)
GRAND TOTAL	15337 (100.00)	23336 (100.00)	56064 (100.00)	45146 (100.00)	116539 (100.00)	292446 (100.00)	62000 (100.00)

Source : Different Five Year Plans, Planning Department, Uttar Pradesh.

Appendix Table-4

Plan-wise Expenditure on Social and Community Services : Uttar Pradesh

Head of Development	First Plan (1951-56)	Second Plan (1956-61)	Third Plan (1961-Plan 71)	Three Annual Plan (1966-71)	Fourth Plan (1969-74)	Fifth Plan (1974-79)	Sixth Plan outlay (1980-85)
General Education	1957	1430	4567	1255	5790	10121	16500
Technical Education	-	317	721	458	716	676	1000
Scientific Services and research	-	-	41	7	21	87	275
Medical Health	1309	983	2470	1535	3244	3774	1500
Water supply and Sanitation	-	250	1167	1082	2002	11243	30600
Housing	762	858	447	147	1396	6604	12000
Urban Development	-	-	-	-	630	632	6000
Information and Publicity	-	57	63	10	28	72	200
Labour and Labour Welfare	101	154	271	220	852	312	600
Welfare of SC and ST	345	522	563	195	540	2548	3500
National Rural employment programme	-	-	-	-	-	-	10000
Social Welfare	-	30	25	53	109	108	900
Nutriation	-	-	-	-	-	660	1000
TOTAL	4474	4601	10335	4963	15328	36837	97575

Source : Five Year Plans of Different Years, Uttar Pradesh, State Planning Commission.

Appendix Table-5

Plan-wise Percentage of Expenditure on Community Service in U.P.

Head of Development	First Plan (1951-56)	Second Plan (1956-61)	Third Plan (1961-66)	Three Annual Plans (1966-69)	Fourth Plan (1969-74)	Fifth Plan (1974-79)	Sixth Outlay (1980-85)
General education	43.74	31.08	44.19	25.29	37.77	27.56	16.92
Technical Education	-	6.89	6.97	9.23	4.67	1.83	1.02
Scientific service and research	-	-	0.39	0.14	0.14	0.24	0.28
Medical and public health	29.26	21.37	23.90	30.93	21.15	10.24	15.38
Water supply and Sanitation	-	5.43	11.29	21.81	13.06	30.72	31.36
Housing	17.03	18.65	4.29	2.96	9.11	17.93	12.30
Urban Development	-	-	-	-	4.11	1.81	6.16
Information and publicity	-	1.24	0.62	0.20	0.18	0.19	0.20
Labour and Labour Welfare	2.25	3.35	2.63	4.44	5.58	0.48	0.61
Welfare of ST and SC and Backward	7.72	11.34	5.45	3.93	3.52	6.92	3.58
National rural employment programmes	-	-	-	-	-	-	10.24
Social Welfare	-	0.65	0.24	1.07	0.71	0.29	0.92
Nutrition Programme	-	-	-	-	-	1.79	1.03
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source : Plan Expenditure in Uttar Pradesh, Planning Commission, Lucknow.

Appendix Table-6

**Rural and Urban Outlay on Water Supply and Sanitation
in Sixth Plan (U.P.)**

Area	Approved outlay in Sixth Plan (1980-85)	Actual Expenditure (1980-81)	Approved outlay (1981-82)	Proposed outlay (1982-83)
Rural	20350 (70.29)	3642.99 (69.50)	2770 (48.85)	4200 (61.32)
Urban	8500 (29.36)	1589.16 (30.34)	2880 (50.79)	2625 (38.32)
Water poll- ution and Central Board	100 (0.35)	6 (0.01)	20 (0.36)	25 (0.36)
TOTAL	28950 (100.00)	5238.15 (100.00)	5670 (100.00)	6850 (100.00)

Source : Draft Annual Plan 1982-83, Planning
Department, Uttar Pradesh, Lucknow.

Appendix Table-7

Plan-wise Expenditure on Community Services

(Rs. in lakhs)

Head of Development	Sixth Five Year Plan outlay	1980-81 actual expenditure	1981-82 actual expenditure	1982-83 actual expenditure	1983 - 84 Approved outlay	Anti-cipated exp.	Proposed outlay 1984-85	Anti-cipated exp. 1984-85
General education, art & culture	16500	2367	3301	5049	4482	4793	5206	20429
Technical Education	1000	165	217	419	726	1032	1250	3083
Scientific services and research	298	47	53	121	179	451	503	1175
Medical and public health	15000	1825	2793	3367	4161	4529	4550	17064
Water supply & sanitation	30600	5438	6209	6500	6075	6075	6965	33187
Housing	12040	3447	3544	3370	2499	2354	3071	15786
Urban Development	6000	399	1094	951	1100	1124	1365	4933
Information and publicity	200	79	37	127	77	77	65	385
Labour and Labour welfare	580	76	109	216	348	287	439	1127
Welfare of SC & ST and Backward caste	3500	819	659	1086	884	884	1050	4498
Employment, national-rural employment programme	20	2	2	14	52	32	33	83
Social welfare	900	126	153	212	261	254	275	1020
Nutrition programme	1000	140	137	308	400	400	926	1911
TOTAL	87638	14930	18308	21740	21244	22292	25827	103097

Source : Draft Annual Plan 1984-85, Vol. 7, U.P., Government of U.P., Planning Department, December, 1983.

Appendix Table-8

Sixth Five Year Plan and Its Outlay (U.P.)

Head of Development	Sixth Five Year Plan Outlay	1980-81 actual expenditure	1981-82 actual expenditure	1982-83 actual expenditure	1983-84 Approved Outlay	Proposed Outlay 1984-85	Anti-cipated Outlay 1984-85	
Agricultural and allied services	63376	10715	13088	17326	19137	20189	21860	83178
Cooperation	5739	1594	1189	2806	1045	1048	1158	7795
Irrigation and head control and power development	373100	53649	61291	64046	76872	77031	94260	350277
Industry and mining	33110	6174	7082	7164	6629	7162	8891	36453
Transport and communication	55000	11680	10640	10785	12070	12506	13814	59425
Social and community services	87638	14930	18308	21740	21244	22292	25827	103097
Economic services	1440	79	243	1360	393	392	555	2633
General services	597	136	103	100	110	110	135	84
TOTAL	620000	98957	111944	125311	137500	140730	166500	643442

Source : Draft Annual Plan, 1984-85, Vol. II, Planning Dept., Government of U.P., 1983.

Note : The Plan outlay of Sixth Five Year Plan for different sectors do not tally with Table 3 and 4 because there have been some reallocations among these sectors.

AA: